REMARKS

Claims 1-6 and 8-14 remain pending in this application. Claims 1, 3, 5, 6, 8, 10, and 12-14 have been amended to define still more clearly what Applicant regards as his invention. Claims 7 and 15 have been canceled without prejudice or disclaimer of subject matter. Claims 1, 5, 6, 8 and 12-14 are independent.

The Office Action states that a new Declaration is required and asserts that the originally filed one was unsigned. Applicant respectfully traverses this requirement and notes that the Patent and Trademark Office has acknowledged receiving a Declaration executed by the inventor in this application, as evidenced by the attached copy of the receipt-stamped postcard dated October 1, 1999. Accordingly, it is submitted that no new Declaration is required.

Claim 3 was rejected under 35 U.S.C. § 112, first paragraph, for allegedly not being supported by an enabling disclosure. In particular, the Office Action states that the phrase "plural sets of viewing information" in Claim 3 introduces new matter. Although Applicant does not concede the propriety of this rejection, especially since the foregoing phrase is similar in substance to (and supported by) the phrase "plural viewing information" of original Claim 3, Applicant has amended Claim 3 to recite --plural items of viewing information, which is supported in the originally filed application, at least in the original version of Claim 3. Accordingly, withdrawal of the rejection under Section 112, first paragraph, is respectfully requested.[1]

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1/It is noted that Claim 10 has been amended similarly, even though Claim 10 was not rejected under Section 112, first paragraph, in the Office Action.

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Claim 7 was rejected under Section 112, second paragraph, as being indefinite. Without conceding the propriety of this rejection, cancellation of Claim 7 renders the rejection moot.

Claims 1-5 and 8-13 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patent 5,276,779 to Statt in view of U.S. Patent 6,134,695 to Sasaki et al.; Claims 6 and 14, as being obvious from Statt and Sasaki et al. in view of U.S. Patent 5,598,272 to Fisch et al.; and Claims 7 and 15, as being obvious from Statt in view of Fisch et al.

First, cancellation of Claims 7 and 15 renders the Section 103(a) rejections of those claims moot.

The present invention relates to image processing techniques for performing color matching according to ambient light. Such techniques can be used in, for example, a copy machine, a facsimile machine, or a system constituted by a plurality of devices (e.g., a host computer, an interface, a reader, and a printer). The aspects of the present invention recited respectively in Claims 1, 5, 6, 8, and 12-14 are related to a user interface to set a parameter of a viewing condition or chromatic adaptability used in a color process based on a color appearance model. For example, one notable feature of the present invention recited in Claims 1, 5, 6, 12, and 13 is that the parameter is set by a user inputting a positional relation, such as viewing spacing or viewing distance, between a viewing subject at a data source side and a viewing subject at a data destination side through the user interface. For example, in a preferred embodiment, the user slides an icon 2012 on a slide bar in accordance with the viewing spacing between a monitor and a print out, as shown in

Fig. 26.[2/] By virtue of the features variously recited in the independent claims, the user

easily sets the parameter of the viewing condition.

Independent Claim 1, for example, is directed to an image processing

method for performing a color process based on a color appearance model. The method

comprises the steps of inputting location information which relates to a viewing space

between a viewing subject in a data source side and a viewing subject in a data destination

side, setting a parameter of viewing condition based on the inputted location information,

and performing the color process based on the color appearance model by using the set

parameter.

Independent Claim 1 has been amended to even further clarify its

distinguishing features over the prior art. One notable feature of Claim 1 is that a viewing

condition, such as location information which relates to a viewing space between a viewing

subject in a data source side and a viewing subject in a data destination side, can be easily

and quickly inputted using a user interface such as that shown in Fig. 26.

Statt, as understood by Applicants, relates to a method for the reproduction

of color images based on viewer adaptation. Fig. 1, cited in the Office Action, is a

schematic diagram of a system for processing a digital color image. Fig. 2, also cited in the

Office Action, is a schematic diagram showing the steps involved in generating, processing,

and displaying a color image signal. Digital color information signals R,G,B generated by

the input device 10 are directed to an input calibration and transformation function 112

2/ Of course, the scope of the claims is not limited by the details of any preferred
embodiment, including that just described or described below.

located in the computer 12. The R,G,B signals are transformed to color image signals in a reference color space such as a tristimulus value color space X,Y,Z by an input calibration and transformation function 112. Alternately, the R,G,B signals may be generated by an operator utilizing an application program residing in the computer 12. Regardless of the source of the tristimulus value signals X,Y,Z, they are transformed by a viewer adaptation transformation function 114 into signals X,Y,Z', X,Y,Z", and X,Y,Z'". Generally speaking, the input calibration 112 and the viewer adaptation transformation 114 functions, along with output calibration functions 116, 118 and the display calibration 120, are embodied in software that is executed by the computer 12. The computer 12 employs the viewer adaptation transformation 114 to color adapt the tristimulus signals X,Y,Z', X,Y,Z", or X,Y,Z'" such that the appearance on one or more different output media under one or more different viewing conditions will match the image viewed on the screen of the color monitor 18 and also will match each other when viewed by an observer adapted to the viewing conditions of the monitor 18 or the respective output media. By appearance match it is meant that a viewer adapted to the respective input or output viewing condition will receive the subjective impression that the images match. Side-by-side comparisons of the images are not necessarily made, since the viewer adapts to the viewing conditions peculiar to the particular image or output medium. The color adapted tristimulus values XYZ' or XYZ" are transformed by the output calibration processes 116 or 118 to provide signals R,G,B' or R,G,B", respectively, to drive, in a manner well known in the art, a first output device such as a a color monitor 18 or a second output device such as a thermal printer 20. (See column 4, lines 27-68.)

Sasaki et al., as understood by Applicant, relates to a code image data output apparatus and method for converting so-called multimedia information including audio information such as voice data or music data, image information obtained from a camera or a video device, and digital code data obtained from a personal computer or a word processor, into an optically readable code pattern.

The Office Action states on page 4 that Statt discloses an image processing method which comprises the step of "inputting location information (i.e., viewing conditions by means of devices 14/112, 114, and 120) which relates to a positional relation between a viewing subject in a data source side (18) and a viewing subject in a data destination side (18' or 20)." However, as explained above, the input calibration and transformation function 112, and the display calibration 120, merely convert R,G,B to X,Y,Z; and the viewer adaptation transformation function 114 performs a correction in consideration of ambient light. Nothing has been found in Statt that would teach or suggest a user interface to (easily and quickly) input a viewing condition such as location information, as recited in Claim 1. Indeed, the Office Action concedes on page 4 that "Statt fails to disclose [a user interface for] setting a parameter of viewing condition [based on the inputted location information]." The Office Action reasons that Sasaki et al. teaches this feature, and cites col 13, lines 17-20, and Figs. 15 and 16, of Sasaki et al.

The cited portion of Sasaki et al. states that the coding parameter input section 66 is a user interface portion for inputting coding parameters including a compression level, a correction level, an interleaving level, a print resolution , and the dot size and shape of a dot code. However, while Sasaki et al. may teach a user interface

portion, there is no teaching or suggestion, either in that patent or in Statt, of a user interface to input a viewing condition such as <u>location information</u>, as defined in the context of Claim 1. That is, nothing has been found, or pointed out, in either Statt or Sasaki, that would teach or suggest "inputting location information which relates to a viewing space between a viewing subject in a data source side and a viewing subject in a data destination side," "setting a parameter of viewing condition based on the inputted location information," and "performing the color process based on the color appearance model by using the set parameter," as recited in Claim 1.

For at least these reasons, Claim 1 is believed to be clearly allowable over Statt and Sasaki et al., whether considered separately or in combination.

Independent Claims 5, 8, 12, and 13 each include similar features to those discussed above in connection with Claim 1. Accordingly, Claims 5, 8, 12, and 13 are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

The rejection of Claim 6 over Statt, Sasaki et al., and Fisch et al., will now be addressed.

Claim 6 is directed to an image processing method for performing a color process on input image data based on a color appearance model. The method comprises the steps of inputting a manual instruction of a user, which relates to conditions for respectively adjusting balance and absolute intensity of a chromatic adaptability, setting a parameter of the chromatic adaptability from the inputted balance and absolute intensity, and performing forward and inverse conversions of the color appearance model by using the set parameter.

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One notable feature of Claim 6 is that a user can input conditions for respectively adjusting balance and absolute intensity of a chromatic adaptability through, for example, a user interface, such as that provided in Fig. 27. Furthermore, the image processing method of Claim 6 sets the parameter used in the forward and inverse conversions of the color appearance model from the inputted balance and absolute intensity. Support for these features can be found in the specification at, for example, page 69 and Fig. 27. That is, parameters Ds and Dd are calculated from BL (balance) and VL (absolute intensity) indicated by slide bars 2113 and 2114, and the forward and inverse conversions are controlled by the calculated parameters Ds and Dd. In other words, the image processing method of Claim 6 allows a user to control the parameters used in two processes different from each other, i.e., the forward and inverse conversions.

The deficiencies of Statt and Sasaki et al. were pointed out above.

Fisch et al., as understood by Applicant, relates to a visual calibrator for color halftone imaging.

However, Applicant respectfully submits that nothing has been found, or pointed out, in either Statt, Sasaki et al., or Fisch et al., that would teach or suggest "inputting a manual instruction of a user, which relates to conditions for respectively adjusting balance and absolute intensity of a chromatic adaptability," "setting a parameter of the chromatic adaptability from the inputted balance and absolute intensity," and "performing forward and inverse conversions of the color appearance model by using the set parameter," as recited in Claim 6.

For at least these reasons, Claim 6 is believed to be clearly allowable over Statt, Sasaki et al., and Fisch et al., whether considered separately or in combination.

Independent Claim 14 corresponds in many relevant respects to Claim 6, and is believed to be patentable for at least the same reasons as those discussed above in connection with Claim 6.

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.
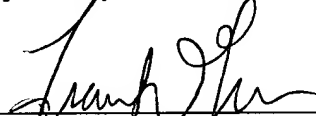
This Amendment After Final Action is believed clearly to place this application in condition for allowance and its entry is therefore believed proper under 37 C.F.R. § 1.116. At the very least, however, it is believed that the formal rejections and the objection to the Declaration have been overcome, and cancellation of Claims 7 and 15 eliminates all issues relating to those claims. In any event, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, the

Examiner is respectfully requested to contact Applicant's undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's attorneys may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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